



LA SANITATION AND THE ENVIRONMENT
WATERSHED PROTECTION DIVISION
ENVIRONMENTAL ENFORCEMENT & EMERGENCY RESPONSE
UNIT

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STANDARD OPERATING GUIDELINES
Human Waste (Blood, Bodily Fluids or Feces) Clean Up Policy

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Human Waste (Blood or Bodily Fluids) Clean-Up Policy

I. PURPOSE

The purpose of this protocol is to document the protocols and procedures for the field staff of the Los Angeles Sanitation and Environment (LASAN), Watershed Protection Division (WPD) Environmental Enforcement & Emergency Response Unit. The protocol will outline how LASAN divisions will clean up the human waste in order to reduce the potential adverse human health impacts associated with the waste in the public right-of-way

II. INTRODUCTION

This policy is to be used for remediation projects where human waste (blood, bodily fluids, or feces) removal and disposal are required. Sampling and testing of this material is not necessary due to the difficulty, time and expenses involved, and due to the potential public health issue (1). Staff should also receive and complete the Bureau's Bloodborne Pathogen Training.

Proper use of personal protective equipment (PPE) and cleaning techniques is important for effective infection control. Staff should be aware that in work areas where human waste is located there is a potential for deposits to occur on surfaces and soil that in turn can transmit infection. Especially be aware, while working in areas where vomit and diarrhea have occurred because they may harbor germs that can spread through the air and contaminate surfaces and food for up to 25 feet away (2).

Human fecal matter may contain a variety of pathogens, including bacteria, viruses, and parasites. Pathogens potentially present in human feces include *Bacterioides spp.*, *Salmonella*, *Shigella*, *Yersinia*, *Campylobacter*, *Aeromonas*, *Candida*, *E. coli* 0157:H7, *Klebsiella*, *Cryptosporidium*, *Entamoeba histolytica*, viruses including Norovirus and Hepatitis A, and intestinal parasites. Additionally, visible blood in feces may indicate the present of Bloodborne pathogens including HIV, Hepatitis B, and Hepatitis C (3).

Note: Human urine does not typically contain the pathogens that may be found in human feces. It can be potentially hazardous if there is visible blood or if originating from an individual with a urinary tract infection. As such, human urine shall be treated as human waste for this procedure (3).

III. PROCEDURE

This cleanup procedure is for large amounts of concentrated human waste. Human feces may contain bacteria and other pathogens that can cause illness. Staff can prevent infection by avoiding direct contact with human feces while cleaning affected areas. Always follow the Center for Disease Control (CDC) recommended concentrations of sodium hypochlorite for disinfection. Keep children and pets away from areas that have accumulated human waste.

Rules

- Only healthy (not immune-compromised) individuals may perform clean ups.
- Do not create and inhale dust from contaminated areas.
- No dry sweeping or dry clean up (before applying disinfectant).
- No eating, drinking or smoking during clean up.
- Consult supervisor before cleaning up inside occupied buildings, in enclosed spaces, or near building ventilation systems.
- Follow CDC recommendations for disinfection: a solution of 5.25% sodium hypochlorite diluted 1:10 with water is currently the LASAN standard disinfectant (4).

Required Personal Protective Equipment (PPE)

- Long pants
- Waterproof gloves (nitrile/latex gloves)
- Tyvek coverall
- Eye protection (googles)
- Filter mask: N95 or higher particulate respirator
- Closed-toe (water proof shoes preferred).

Cleanup

Step 1. Don the appropriate personal protective equipment.

Step 2. Do not create dust. Apply a spray solution of disinfectant (1:10 solution of water and 5.25% sodium hypochlorite solution) to human waste until soaked before and during clean up to prevent the formation of airborne dust. Continue wetting affected areas as needed with disinfectant throughout the cleanup.

Step 3a. Small cleanup (less than 55 gallons): after applying CDC recommended disinfection solution place the human waste debris in plastic bag and double bag when finished. If a contractor is available place the human waste into a 5 gallon container (or other appropriate sizes).

Step 3b. Large cleanup (greater than 55 gallons): create a berm around the human waste affected area. Do not create dust. Apply a spray solution of disinfectant (1:10 solution of 5.25% sodium hypochlorite solution and water) to the affected area until soaked before and during clean up to prevent the formation of airborne dust and carefully wash down (be very careful not to create dust or mist) and collect wastewater using a City vacuum truck "Vactor".

Step 4. Cleanup is considered completed when there is no visible dust or debris from the human waste remaining.

Step 5. Reapply the CDC recommended bleach solution (mist) to affected area and keep the area wet for another 10 minutes. Do not rinse or create sheet flow.

Step 6. Air-dry before allowing people and pets back into the area.

Step 7. Decontamination of tools, rubber boots, rubber gloves or other contaminated items that will be reused must be cleaned with a 10% bleach solution (1:10 solution 5.25% sodium hypochlorite solution and water). Do this before removing your N95 or higher particulate respirator.

Step 8. After decontamination is completed discard disposable personal protective clothing into the plastic bag. Seal the plastic bag and lastly remove the N95 or higher particulate respirator.

Step 9a. Small cleanup (less than 55 gallons): Dispose of double bagged waste and disposable clothing into a solid waste stream. If contractor is available send human waste containers for incineration using the proper paperwork and procedures.

Step 9b. Large cleanup (greater than 55 gallons): Dispose all collected wastewater properly in accordance with City policy and regulations.

Special Situations

In certain situations it is important to take special care not to spread bacteria. This is true if cleanup is inside buildings, near ventilation systems, or in areas that are occupied by children.

In critical areas (e.g. in a children's play area) after the area is cleaned and no visible evidence remains, the area can be further disinfected with a 10% bleach solution.

Disinfection

Below is a reference table to help staff identify the correct dilution of sodium hypochlorite to meet CDC recommendations.

| CDC Disinfectant Recommendation 1:10 dilution ratio of water to bleach solution (5.25-6.00% sodium hypochlorite) Note: informational for internal LASAN/WPD use in small blood spills | | | | |
|--|-----------------------------------|---------------|-------------------|--------------------------------|
| CONVERSION TABLE | | | | |
| sodium hypochlorite concentrations | Bleach Sol. gal./container | PPM | water gal. | New concentration (PPM) |
| 5.25% solution | 0.10 | 52,500 | 0.90 | 5,833 |
| 5.25% solution | 1 | 52,500 | 10 | 5,250 |
| 5.25% solution | 10 | 52,500 | 200 | 2,625 |
| 6.0% solution | 0.25 | 60,000 | 0.75 | 20,000 |
| 6.0% solution | 1 | 60,000 | 10 | 6,000 |
| 6.0% solution | 0.33 | 60,000 | 0.66 | 30,000 |
| 6.0% solution | 5 | 60,000 | 200 | 1,500 |
| 6.0% solution | 10 | 60,000 | 200 | 3,000 |
| 6.0% solution | 15 | 60,000 | 200 | 4,500 |

MINIMUM OF 5,250 PPM!

| Unit | conversion | conversion | | |
|----------------|-------------------|-------------------|--|--|
| one (1) gallon | 3.785 liters | 16 cups | | |
| 1% | 10,000 PPM | | | |
| | | | | |
| | | | | |
| | | | | |

Because household bleach contains 5.25%–6.15% sodium hypochlorite, or 52,500–61,500 ppm available chlorine, a 1:1,000 dilution provides about 53–62 ppm available chlorine, and a 1:10 dilution of household bleach provides about 5250–6150 ppm.

<https://www.cdc.gov/infectioncontrol/guidelines/disinfection/disinfection-methods/chemical.html>

IV. PESTICIDE REGULATIONS

The Los Angeles County Agriculture Commissioner has regulatory authority for pesticide use in the County. The Department of Pesticide Regulations (DPR) has authorized the use of specified sodium hypochlorite solutions in the public right of way made by or under the direction of official public agency. Please see attachments **ag.com.1** and **ag.com.2**. Note all general applicator licensees must adhere to the requirements set forth by the County Agriculture Commissioner.

V. REFERENCES

- 1) Bird, Bat, and Rodent Droppings Remediation and Disposal, *New York State*, <https://online.ogs.ny.gov/dnc/masterspec04/docs/Division02ExistingConditions/028733Bird,BatAndRodentDroppingsRemediationAndDisposal.doc>
- 2) Clean-up Procedures for Vomit and Diarrhea, *OKC-County Health Department*, <https://www.occhd.org/application/files/9614/8673/5465/food-VomitCleanUp.pdf>
- 3) Human Feces and Urine, *EHS Cornell – Cornell University*, <https://sp.ehs.cornell.edu/lab-research-safety/bios/bars/Documents/BIO BARS Human Feces and Urine.pdf>
- 4) Guideline for Disinfection and Sterilization in Healthcare Facilities, *CDC*, <https://www.cdc.gov/infectioncontrol/pdf/guidelines/disinfection-guidelines.pdf>.